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(54) **CATALYST FOR EXHAUST EMISSION PURIFICATION AND SYSTEM FOR THE SAME**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a NOx adsorption reduction catalyst for exhaust gas purification and an exhaust purification system using the same, such that NOx reduction purification efficiency is improved greatly with superior purification performance for lean burn exhaust gas, related to conditions of low exhaust gas temperature and a low HC/NOx ratio.

SOLUTION: A NOx adsorption reduction catalyst contains platinum and a NOx adsorption performance improvement component, in which standard generation of Gibbs energy by nitrates is -40 to -700 kJ/mol. Also, the NOx adsorption reduction catalyst activates a reaction represented as an equation $2NO+O2 \rightarrow 2NO2$ in an oxygen-excessive exhaust gas. In a NO2 generation stability temperature range, where the generated NO2 is stable, the NOx adsorption reduction catalyst can adsorb and reduce NOx. This exhaust gas purification system is configured to dispose the NOx adsorption reduction catalyst in an oxygen-excessive exhaust gas passage. HC and CO concentration variation means is provided upstream of the NOx adsorption reduction catalyst passage, changing concentrations of hydrocarbons and/or carbon monoxides around an inlet of the NOx adsorption reduction catalyst in the NO2 generation stability temperature range.